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PROJECT

Contemporary
Historical
Evaluation of
Combat
Operations
REPORT

**APPROVED FOR
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SHORT ROUNDS

JUNE 1967 - JUNE 1968

23 AUGUST 1968

HQ PACAF

**Directorate, Tactical Evaluation
CHECO Division**

Prepared by:

Melvin F. Porter

Project CHECO 7th AF, DOAC


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FOREWORD

A recurring problem facing commanders at all levels is that of "Short Rounds", the inadvertent or accidental delivery of ordnance resulting in injury or death to friendly forces or noncombatants. A previous CHECO Special Report on Short Rounds in South Vietnam, from the beginning of 1965 through May 1967, evaluated several of these incidents, their causes and effects, their chronology, and corrective steps taken to alleviate the problem.

This study covers the subject from May 1967 through 30 June 1968, with special emphasis on those incidents involving troops-in-contact, the most prevalent type of Short Round since the turn of the year and perhaps the most difficult to eliminate. For purposes of this study, rather than give a brief resume of each incident, several significant Short Rounds have been examined in detail with a view toward showing how failure to communicate, lack of detailed knowledge of the ground situation, poor flying visibility, and other contributing factors tend to produce a situation where human error takes over and a Short Round is the result. Efforts at all levels to counter the growing trend of troops-in-contact (TIC) Short Rounds (a corollary of the increased ground activity in South Vietnam) are shown. The problems are evident, the solutions difficult; if one observation emerges, it is that the continuing attention, concern, and efforts to reduce Short Rounds must not be relaxed.

[REDACTED]

*
SHORT ROUNDS

A COMUSMACV report on "Supporting Fire Incidents" revealed that 650 such incidents were recorded in South Vietnam in 1967, and that these Short Rounds took the lives of 858 persons (friendly civilians or military) while injuring another 3,106.^{1/} From among a variety of causes, statistics show that ordnance delivered by fixed-wing aircraft accounted for only 58, or 8.9 percent, of the 650 incidents; 7AF aircraft were involved in 27 incidents, or 4.15 percent of the total. However, the inherent destructive capability of air-delivered ordnance is such that 28.8 percent of the deaths, and 24.4 percent of the injuries came in that manner.^{2/} The statistical breakdown of incidents showed:

<u>TYPE FIRE</u>	<u>INCIDENTS/PCT</u>	<u>DEATHS/PCT</u>	<u>INJURIES/PCT</u>
Artillery	388/ 52.0	344/ 40.0	1,359/ 43.7
Mortar	133/ 20.5	81/ 9.4	539/ 17.4
Small-Arms	68/ 10.5	43/ 5.0	164/ 5.3
Fixed-Wing	58/ 8.9	246/ 28.8	758/ 24.4
Rotary-Wing	37/ 5.7	119/ 13.9	226/ 7.3
Naval Gunfire	3/ .4	10/ 1.2	21/ .7
Miscellaneous	13/ 2.0	15/ 1.7	39/ 1.2
	<u>700/100</u>	<u>858/100</u>	<u>3,106/100</u>

The statistics, although important, cannot tell the entire story. All service components are acutely aware of the damage accrued from these incidents in terms of lowered effectiveness of the fighting forces, lessened rapport between components themselves and Vietnamese nationals, and the unavoidable dilution of the total effort. The strong moral obligation to avoid such incidents, felt by top echelons of command, led COMUSMACV and the Commander, Seventh Air Force, among others, to

[REDACTED]

make concerted efforts to reduce them at every level. Gen. William C. Westmoreland, as early as 1964, stated "...one mishap, one innocent civilian killed, one civilian wounded or one dwelling needlessly destroyed, is one too many."^{3/}

With not only the implicit tragedy of Short Rounds involved, but with the hard eye of news media looking for spectacular copy, commanders at all levels stressed the importance of avoiding Short Rounds by every possible means--vigilance in target acquisition and marking, accurate expenditure of ordnance, improvement in communications, and precision in navigation, to name a few. In a 1967 letter to his commanders, Gen. William W. Momyer, Commander, Seventh Air Force, said:^{4/}

"...Commanders will take any and all action to remove from flight lead status any pilot who indicates an unwillingness to devote his full attention to this singular purpose.

"Due to the vicissitudes of warfare, I do not expect to completely eliminate tactical mishaps. However, I intend to investigate promptly and thoroughly each incident; and if circumstances indicate, you can expect me to direct flying evaluation board or administrative disciplinary action.

"I again enjoin you to indoctrinate your aircrews concerning the very critical situation in which we as an Air Force in a friendly country find ourselves. You are requested to review your operational procedures and make any recommendations to me designed to eliminate the possibility of future Short Round incidents...."

This high-level attention and continuous monitoring of all operational aspects did serve to keep Short Round incidents in 1967 within

[REDACTED]

limits. With 115,477 Seventh Air Force strike sorties flown, and 27 incidents registered, the ratio established was one incident for every 4,276 sorties. Considering the fluid--no bomb line--battle situation, the nature of the terrain and jungle cover, continued periods of inclement weather, and the enemy tactic of hugging friendly positions closely to discourage airstrikes and artillery, the ratio, if regrettable, is at least understandable. It is interesting that the figure appeared to have "stabilized" as far as the situation allowed over the 1966-1967 period. In 1966, 7AF recorded one incident for every 4,447 sorties, which is quite comparable to the 1967 ratio.

General Momyer's letter came soon after the worst known Short Round of the war, in which the village of Lang Vei was bombed and strafed after a navigational error, at a cost of 101 lives and 250 wounded. An unfortunate similarity of terrain features and a mis-set TACAN caused the crews to assume they were 25 to 30 miles southwest of their actual position, in a free bomb zone. The remarkable similarity in topography, haze, and dusk contributed to a situation where none of the crewmembers involved saw the huts and hootches of the village during their strikes. The investigating board understood the mitigating factors but found, in their decision, that the navigational error was the basic cause behind the incident, and that it would not have happened had the crews used all the navigational aids available to them. Three of the four crewmembers were reprimanded under Article 15, UCMJ, fined and grounded (the fourth was absolved of any blame). Each of the three pilots later appeared before a Flying Evaluation Board (FEB) and was returned to flying status.^{5/}

[REDACTED]

As a factor in Short Rounds in South Vietnam, navigational error remained negligible for the remainder of 1967. Other causes--and combinations of causes-- continued to concern commanders, however. Notable among these was the Viet Cong/North Vietnamese Army (VC/NVA) battle tactic of maneuvering in as closely as possible when in contact with friendly forces to complicate the problems of supporting fire. Captured documents support the tactic as the best way to keep the action on a rifle-to-rifle basis and to avoid the devastation of air-delivered ordnance or heavy artillery.

Every ground commander knows the risks incident to calling air-strikes close to his own position, yet when faced with crippling enemy fire at close quarters few have hesitated in accepting those risks. On 20 June 1967, one element of the 1st Air Cavalry came under two separate Short Round incidents within the space of 30 minutes while tightly engaged with the enemy. The action, about ten miles north of Bong Son, was being supported by FAC-controlled tactical air when Sabre 91, an F-100, dropped one bomb 150 meters short of the target. Four soldiers were injured by the detonation. Approximately one-half hour later, Hammer 21, leading a flight of three F-4Cs, delivered two M-117 bombs in support of the same company. One of the bombs impacted directly on target, the other approximately 250 meters short. One cavalry trooper, standing in the open, was slightly wounded. The Army found that the primary cause of injury was the failure of the injured party to follow instructions about standing up during the airstrikes. In both cases, the Army forwarded a letter to 7AF Tactical Air Control

[REDACTED]

Center (TACC) thanking the Air Force for their fine support and acknowledging that the strikes were extremely successful, although made under very difficult conditions. They requested that the pilots be commended on an outstanding job.^{6/}

Other incidents through 1967 included those caused by ground commanders' maneuver of troops without notifying USAF Advisors or FACs, malfunction of external stores stations, erroneous target information, lack of knowledge by ground commanders of air ordnance characteristics, and attempting to exceed the capabilities of a given weapons system.

The greatly increased enemy in South Vietnam during 1968 magnified the Short Round problem in several dimensions. The battlefield has in essence grown larger, more fluid; it has surged into urban areas and has intermeshed itself with streams of refugees. Urgency in battle, combined with the eagerness of fighting troops, has often led to an unclear battlefield situation and a lack of communication. One of the first incidents of 1968 came as a result of this. On 11 January 1968, elements of the U.S. 25th Infantry Division were in contact with the enemy in III Corps and requested air support. Radio contact was established between the ground commander and the FAC, and between the FAC and a flight of F-100s. The friendly positions were properly marked with smoke, yet two friendly troops sustained minor wounds from the F-100 strafing runs when they pursued the enemy beyond the friendly smoke.^{7/}

[REDACTED]

At first, the Commanding General of the 25th Division stated, "Do not treat as Short Round," although the incident fits the criteria. All the ordnance was on target; the troopers were simply overzealous. They pressed their attack beyond the safe area, and in doing so exposed themselves to the exploding 20-mm cannon fire.^{8/}

First Short Round of 1968

In many cases, it was not easy to find a single, simple cause responsible for a Short Round. On 4 January, the first Short Round of 1968 came about from a combination of factors. A sweep-and-clear operation involving the 2d Brigade, 25th Infantry Division (U.S.), had been launched the previous day and, by mid-morning on the fourth, A Company, 1st Battalion, 27th Infantry was in contact with Viet Cong troops approximately 15 miles northwest of Saigon.

After receiving a call for immediate close air support from Brigade Headquarters, III DASC (through 7AF TACC) had two flights of fighters scrambled, Litter 05 from Tuy Hoa, and Falcon 01 Bravo from Bien Hoa, 15 minutes later. Litter Flight, F-100s, carried MK-82 high-drag 500-pound bombs, while Falcon Flight, VNAF F-5s, carried napalm along with MK-82 bombs. Because of the distance element, both flights arrived over the target at approximately the same time.^{9/}

The forward air controller (FAC), Issue 25, selected the aircraft carrying napalm because of the closeness of the troops in contact to Falcon 01 Bravo, and told him that the friendlies would mark their

[REDACTED]

positions with colored smoke prior to the strike.^{10/} The FAC initially was concerned about directing VNAF fighters because of the possibility of language difficulties; however, the fluency of the flight leader convinced him that communication between them was effective and that he was being understood. Nonetheless, Issue 25 made the point of repeating all instructions slowly and clearly, and received correct readbacks from Falcon 01 Bravo in each instance.^{11/}

The ground action was taking place on flat terrain among a checkerboard of hedgerows basically oriented northwest-southeast. The Viet Cong, dispersed along the northeast hedgerow of one of the rectangles, were roughly 100-to-120 meters from the friendly troops, who were located along the southwest row and along a portion of the northwest. With the total situation on the ground discussed and cleared with the ground commanders, and fully briefed to the strike pilots, Issue 25 asked for colored smoke from A Company. After they complied with green smoke along the southwest hedgerow and purple smoke on the northwest, the FAC fired a 2.75" marking rocket. It hit approximately 20 meters southwest of the enemy position. Calling this to the fighters' attention, Issue 25 requested that they place their napalm 15 meters to the east of his mark, and that the run-ins be made in a northwest-to-southeast direction, so the flight path would parallel but not overfly friendly positions.^{12.}

The F-5 flight leader repeated the colors of the friendly smoke, identified the FAC's white phosphorous (WP) marker and its reference

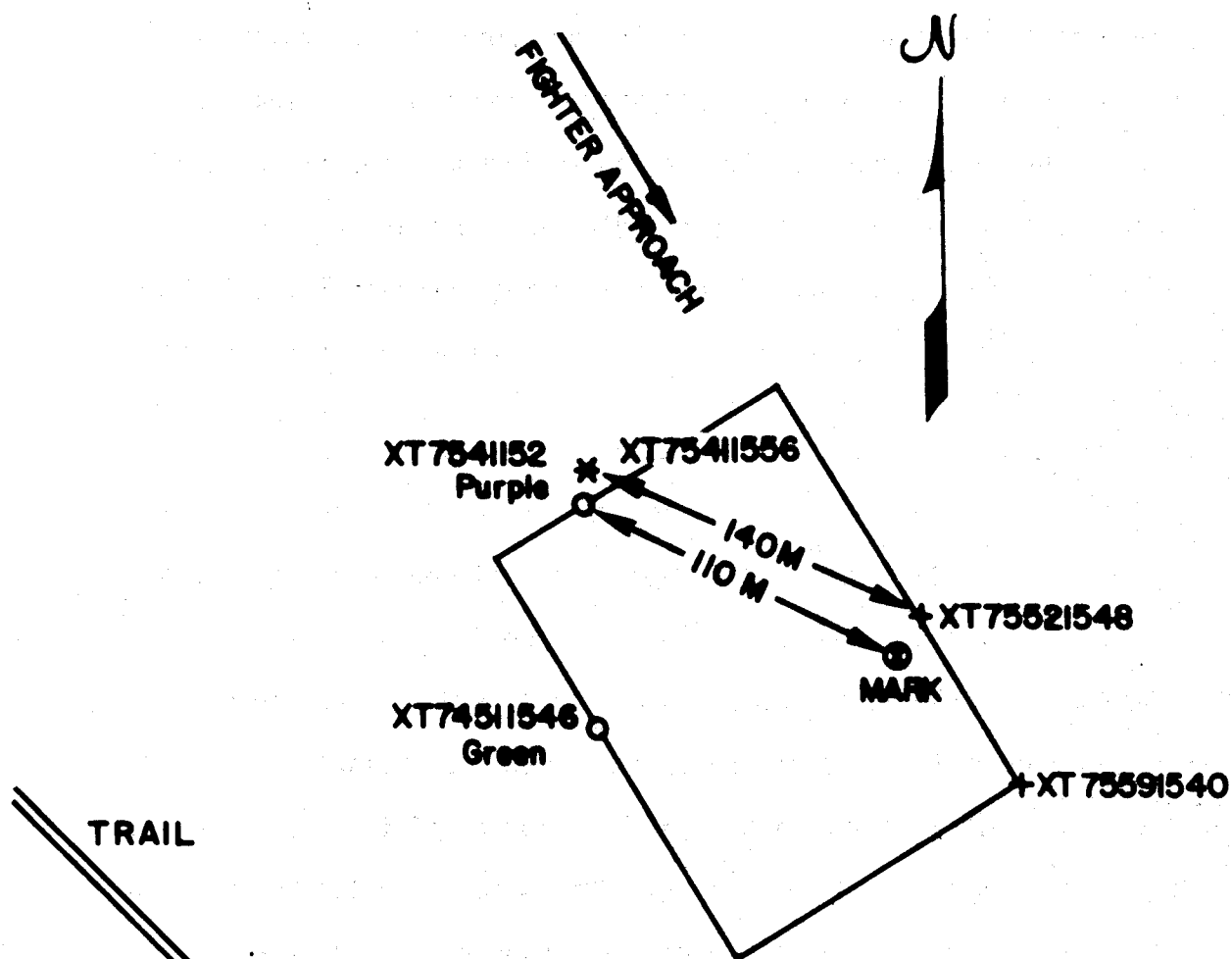
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to the enemy-occupied hedgerow, and acknowledged understanding. With this, the FAC cleared the fighters in and requested Trojan 6 (U.S. Army battalion commander airborne in C&C helicopter) to keep the smoke coming.^{13/} On the first pass, Falcon 01 and 02 Bravo did not pick up the target soon enough because of haze and smoke hanging over the battle area, and made their runs "dry". Falcon 03 Bravo, in extended trail formation, dropped his napalm but it hit short of the purple smoke and splashed up into friendly positions, killing two and wounding 18 infantrymen. Subsequent flight over the area, along with a review of photographs, indicated that the napalm impacted approximately 150 meters short and 100 meters to the right of the desired impact point.^{14/}

Issue 25, monitoring the ground radio frequencies, was immediately aware of the incident and halted the strike. As soon as he determined that friendly casualties were actually incurred, the FAC directed Falcon flight to return to base (RTB).^{15/}

A painstaking investigation revealed the primary cause was that Falcon 03 Bravo did not fully understand the FAC's instructions, and therefore did not properly locate the specific positions of the friendly ground troops. However, several factors were involved.^{16/} The FAC had assumed full understanding of his instructions based upon the fluency in English of the flight leader. It is conceivable that the number three man did not have the same command of the language.

FIRST INCIDENT, 1968



LEGEND

- FRIENDLY
- + TARGET
- ⊙ MARK
- * NAPALM IMPACT

SCHEMATIC LAYOUT

Figure 1

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1. The purpose of this document is to provide a comprehensive overview of the current state of the project and to outline the key findings and recommendations.

2. The project has been conducted in accordance with the established protocols and procedures, and the results have been carefully reviewed and analyzed.

3. The findings indicate that the project has achieved its primary objectives, and the data suggests a positive trend in the overall performance.

4. However, there are several areas that require further attention and improvement, particularly in the areas of resource allocation and communication.

5. The recommendations provided herein are based on the findings and are intended to guide the next steps in the project.

6. It is recommended that the project team continue to monitor the progress and implement the necessary changes to ensure the successful completion of the project.

7. The project manager should ensure that all team members are aware of the findings and recommendations, and that they are working together to address the identified issues.

8. The project should be reviewed on a regular basis to ensure that it remains on track and that any necessary adjustments are made in a timely manner.

9. The project team should also consider the long-term implications of the project and ensure that the findings are being used to inform future projects.

10. The project is considered to be a success, and the team is commended for their hard work and dedication.

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Sketched layouts of the battle area, drawn up by those involved, showed that the patterns flown by the strike pilots gave them a different view of the ground situation than that of the FAC, especially regarding the location of the colored smoke and the position of the ground troops. Falcon 03 Bravo did not know there were troops under his line of flight and observed no colored smoke at his release point. However, his run-in path, as shown by the plot of the napalm splash, was several degrees less than that requested by Issue 25, which placed the F-5 over the northernmost element of A Company. In addition, battle smoke and haze in the target area tended to obscure the FAC's mark and the friendly smoke.^{17/} (Also, although not mentioned in the reports, the low-angle run-in as used in napalm delivery could foreshorten the fighter pilots' perspective of the colored smoke, making the two smokes appear closer to each other than they actually were, if they happened to be in line. This could account for the difference in battle area sketches as drawn by the VNAF pilots and the FAC.) The tragedy of the incident was that, had the napalm impacted a mere 30 meters farther than it did, no friendly casualties would have been incurred and the strike would have been considered a success. The combination of an apparently minor lack of understanding, the closeness of the action, drifting smoke and haze, and a run-in a few degrees different from that directed by the FAC culminated in the Short Round.

The investigating officer from III DASC recommended in his report:^{18/}

[REDACTED]

"This report should be brought to the attention of all ALO/FAC personnel."

"This report should be brought to the attention of appropriate USAF Advisory personnel for the VNAF."

"ALO/FAC personnel concerned with the control of VNAF strike aircraft during the conduct of close air support operations should recognize that a communications problem can exist between USAF and VNAF aircrews. This necessitates that the FAC take all possible measures to insure positive understanding between FAC and strike pilots in regard to identification and location of friendly ground force positions."

"Special emphasis concerning control of VNAF strike aircraft should be stressed during academic training at the Theater Indoctrination School, Binh Thuy AB, RVN."*

The recommendations in no way cast any cloud of doubt about the ability of VNAF pilots; the report merely pointed out that--as in any communications involving a second-country language--the potential danger of misunderstanding does exist, and all involved should be aware of and ready to rectify any such misunderstanding. As a matter of interest, the report stressed that F-5 strikes, since the beginning of their use by the VNAF, had been controlled by USAF FACs, and from August 1967 until January 1968, 98 VNAF sorties had been flown in support of U.S. Forces in III Corps without incident.^{19/}

*This facility is now located at Phan Rang Air Base, RVN.

[REDACTED]

Disorientation in Gathering Darkness

A not dissimilar incident occurred in II Corps on 27 February 1968, which further illustrated the difficulties of supporting troops in extremely close contact under conditions that were not ideal. This took place during Operation MAC ARTHUR in jungly, mountainous terrain northwest of Dak To, when two companies of the 3d Battalion, 12th Infantry (U.S.) were engaged in heavy, close contact with the enemy on three sides of their perimeter. With the strongest attack coming from their north-northeast, the friendlylies on the ground had FAC Cider 17 direct a close air support strike by Blade 01, delivering high-drag (HD) bombs and napalm with "outstanding results".^{20/} The napalm was approximately 50 meters from the friendly perimeter.

Although dusk was rapidly approaching (1820H), another flight of fighters arrived in answer to the request for immediate air. This flight of two F-100s carried no napalm; however, Litter 01 was loaded with two MK-82 HD 500-pound bombs and two M-117 retarded 750-pound bombs. Because of an aircraft change on the scramble pad, Litter 02 carried four M-117 low-drag 750-pound bombs. Both aircraft had 800 rounds of 20-mm aboard.^{21/}

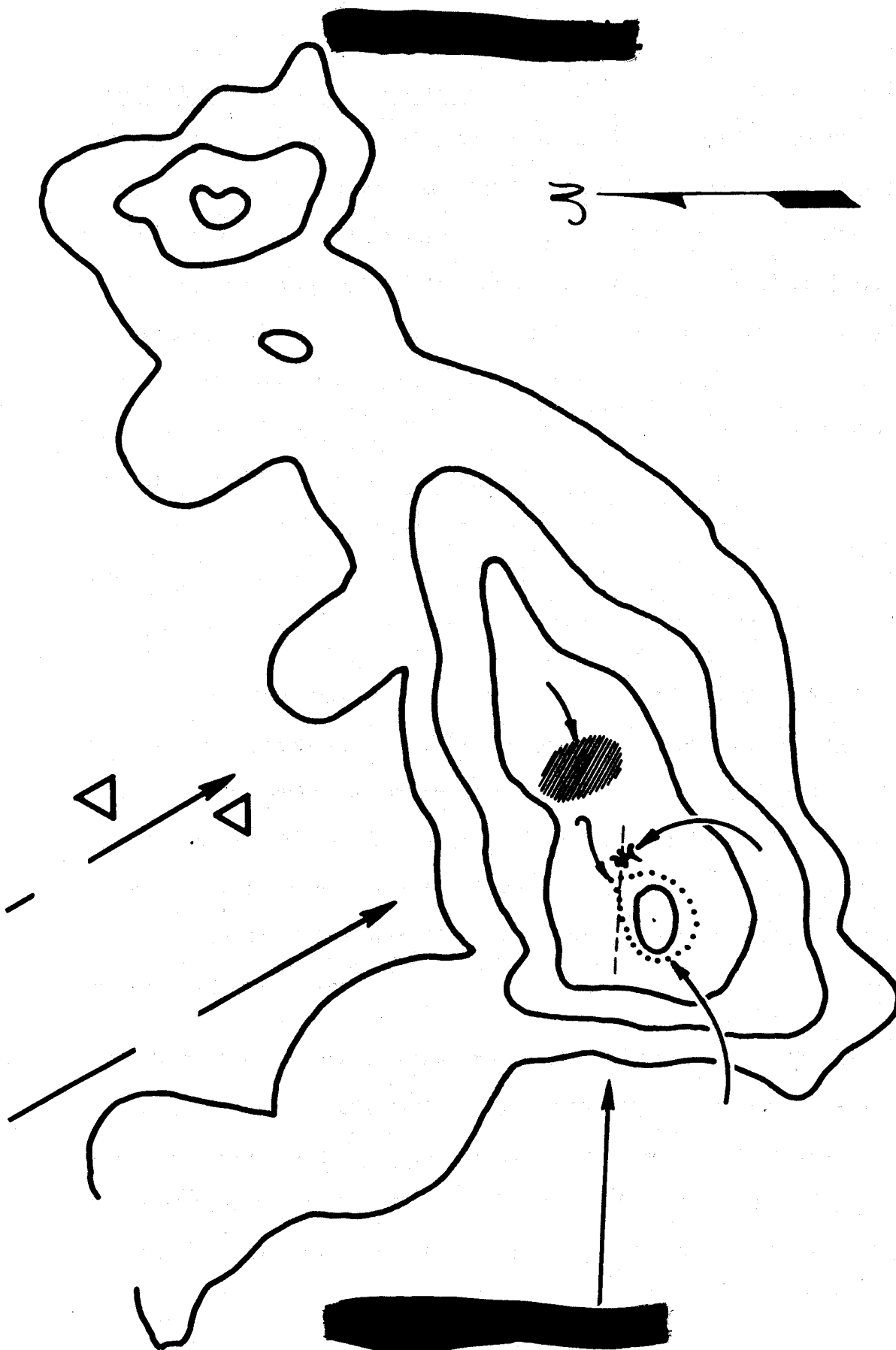
After their check-in with him, Cider 17 briefed the fighters on the ground situation, altimeter setting, terrain elevation, and winds, and gave them a run-in heading of northwest to southeast. Cider 17 gave the fighters a verbal description of the target area, pointing out the still-burning napalm from the previous strike, the

[REDACTED]

identification smoke from the friendly troops, and a downed helicopter situated between friendlies and the napalm. Although the fighter pilots positively identified the friendly smoke, the 50-to-65 meter distance between the infantrymen and the napalm was not specified.^{22/} The FAC had Litter 01 deliver his high-drag ordnance into a draw approximately 250 meters northeast of the friendlies, and followed this with Litter 02's slick bombs 300-to-350 meters down the same draw. Both deliveries were critiqued as "very good".^{23/}

With the ground situation described as "intense contact with the enemy" (snipers firing at friendly troops from 30 feet away), the ground commanders asked for strafing runs by the fighters along the western edge of the burning napalm. The napalm made an excellent target mark, since the almost straight line of the western edge of the burn was directly on the 150° run-in heading. This western edge of the napalm was to be used as a point of adjustment in bringing the strafing passes closer to the friendly position. (Although the FAC initially briefed that the "right" edge of the napalm would be the western limit of the strafing runs, the fighter pilots understood that they were to strafe to the right side of the napalm.)^{24/}

Litter 01 was cleared in on his run and went through dry. Litter 02 was cleared in on his run and then cleared to fire; the runs were exactly on target. Litter 01 came around on his first firing run and placed his 20-mm in the area where he had seen 02's rounds impact. At the completion of this run, the ground commander asked for an adjustment of the



SHORT ROUND SCENE IN II CORPS

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Figure 2

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[REDACTED]

fire "up the ridge", meaning at 12 o'clock to the previous passes. The FAC passed this on to Litter 02, who came around for his second run and again placed his rounds perfectly on target, at the southern edge of the napalm burn and exactly where the ground commander had asked for it. ^{25/}

With each succeeding pass, rapidly gathering darkness tended to obscure landmarks identified during the briefing and the initial portions of the airstrike. The napalm fire was still readily visible but terrain features and other ground references were becoming less and less distinct. Litter 01 acknowledged Cider 17's instructions for the adjusted pass; however, once again it appeared that the terminology used between the fighter pilot and FAC was unclear. The forward air controller said that he used the term "southern edge of the napalm", while Litter 01 stated that he heard "up the ridge", and adjusted his aim to the north. In any event, no Short Round would have occurred had not the diminishing light conditions caused both the FAC and the strike pilot to become disoriented with reference to heading and track over the ground. In setting up for his pass, Litter 01 swung around too far to the west and made his run-in on a general heading of 90° rather than the briefed heading of 150°. To the FAC the run-in looked "...very good, just like the last four passes", and he cleared 01 to fire. The strike pilot unknowingly walked his fire across the northern edge of the infantrymen's perimeter, across the downed helicopter and up to the southern edge of the napalm. Without yet knowing that he had

[REDACTED]

friendly casualties below, Cider 17 felt that it was growing too dark to continue the strike and directed the fighters to hold high and dry. It was at this time that the ground commander called to say that the last strike had strafed across his positions.^{26/}

In all, nine men were wounded; two of them later died from their injuries. The helicopter, already bullet-riddled from the crossfire, burst into flames and was destroyed.^{27/}

The combination of troops in close contact, deteriorated visual conditions, and lack of understanding in communications contributed significantly to this example of the most prevalent kind of airstrike Short Rounds in South Vietnam. (Another incident on the same day, 27 February, involving troops-in-contact, occurred when a pilot inadvertently hit the bomb release button instead of the intended trim button, causing release 1,200-1,300 meters short. The bomb run over friendly positions was dictated by terrain and weather.)

The investigators of the Litter 01 incident keyed their recommendations to these factors in an effort to preclude recurrence of similar incidents. They asked that dissemination of reports of such incidents be made to all strike pilots and FACs, so those involved in close air support could better understand the ease with which these Short Rounds could happen, and better prepare to avoid them.

The recommendations stressed that a standard terminology be adopted for FAC/strike pilot air-to-air communications to eliminate, insofar as

possible, any misunderstanding of instructions. Finally, the investigators urged that when a "Troops-in-Contact" situation existed, all aircrews should make every effort to determine the exact ground situation and be able to relate it to the tactical capabilities of the aircraft and the individual aircrew.^{28/} (In the event that the exact ground situation could not be determined and fully understood by all concerned, ordnance delivery should not be attempted; or as Gen. John P. McConnell, the USAF Chief of Staff, had succinctly stated a year earlier, "When in doubt, don't deliver.")^{29/} An additional recommendation was included in the final summary of the report, to the effect that FACs be required to have pilots confirm run-in headings in cases where a heading variation could result in overflight of friendly positions.^{30/}

TIC Short Round in the A Shau Valley

Another Short Round involving troops-in-contact took place on 3 May 1968, in the A Shau Valley during Operation DELAWARE. Although degrees of similarity existed between this and other TIC Short Rounds, the primary cause in this case came about because of a well-intentioned FAC trying to do the best job he could in a fast-moving operation, and one in which the communications lagged behind the situation on the ground.

The 1st Brigade, 1st Air Cavalry, was engaged in artillery and air preparation of Universal Transverse Mercator (UTM) grid squares YD 350010 and YD 360010 northwest of A Luoi, prior to the initiation of a ground sweep through the area. The target squares were heavily fortified, and with this in mind, the brigade sought to employ only heavy HE ordnance.^{31/}

[REDACTED]

Numerous immediate air requests were made, and when it became apparent that the brigade would be receiving mixed loads of ordnance, it was decided to select a dump grid for the CBU. The brigade did not want CBU dispensed in the assault area where friendly troops would be operating, so the brigade S-3 and the Air Liaison Officer (ALO), together, selected the dump grid, YC 385920, several kilometers to the south, in an area where the enemy was known to be operating, but in which no immediate friendly operations were planned. This information was passed to and acknowledged by the airborne FACs, Rash 11 and Rash 32, and to Rash Alpha, the area controller at the Tactical Air Control Party (TACP) on the ground.^{32/} Knowing there were friendly forces operating in the area of Ta Bat, on the Rao Lao River about six kilometers southeast of A Luoi, Rash 11 and 32 questioned the dump grid coordinates, but were informed by Rash Alpha the target was in their area of operations and that no problem with friendly troops existed.^{33/}

There had been considerable movement of friendly elements along the river that morning, however, and Rash Alpha was not completely abreast of the situation. At approximately 0915H, D Company, 1/12th Air Cav, had air assaulted into a Landing Zone (LZ) at YC 390938, only a few kilometers north of the designated dump grid. They were supported by "Cavalier" gunships of the 1/9th Air Cav--the all-helicopter squadron of the 1st Air Cavalry Division. At this time, Rash 11 was directing airstrikes into the YD areas being prepped for the planned sweep. Rash 32 orbited at higher altitude, acting as coordinator with the Division

[REDACTED]

Tactical Operations Center (DTOC) at LZ Evans, a procedure required in the A Shau Valley because of the eastern mountain barrier and generally poor communications at lower altitudes. ^{34/}

Elect 03/04, a flight of two F-100s, had been scrambled from Phu Cat Air Base for use in Operation DELAWARE. When the flight checked in with Rash 11, he discovered their ordnance consisted of MK-82 high-drag bombs, napalm, and CBU-2. Since the CBU had to be dispensed prior to the expenditure of the bombs and napalm, the FAC turned the flight over to Rash 32 for use at the dump grid. Rash 32 took the fighters to the assigned coordinates, but upon their arrival in the target area he noted several helicopters working just south of the river at YC 391943, one and one-half kilometers north of where he had intended to put the CBU. ^{35/}

The sequence of events that followed graphically illustrated the difficulties facing the forward air controllers in their direction of airstrikes, but at the same time showed the absolute necessity for them to make certain their target was the proper one and that they were cleared to strike it.

Upon observing the helicopters firing into an area so close to his target, doubt arose in the FAC's mind as to whether the dump grid had been changed to an active target of opportunity or perhaps was 1,500 to 2,000 meters in error. The latter was a possibility, but past operational experience also indicated that 1/9th Cavalry helicopters, with their extensive reconnaissance capabilities, often uncovered lucrative targets and frequently directed FACs to these areas on short notice. ^{36/} Rash 32 continued strike preparations on this assumption.

[REDACTED]

A call to Rash Alpha established that the TACP was unaware of the helicopter activity, but that they would check further. In the meantime, Rash Alpha advised Rash 32 to contact Cavalier, the gunships, on FM frequency; Rash 32 acknowledged and subsequently made contact with Cavalier 14. Before he made contact, however, the FAC had placed two 2.75 WP marking rockets into the same area the helicopters had been working, and also had the fighters make dry passes in an attempt to attract their attention. When he did contact Cavalier 14, Rash 32 advised him he had CBU that he wanted to put into the area and he asked the helicopters to clear the area for the strike.^{37/}

At this point, the areas of overlapping confusion became significant. Cavalier 14 replied, according to the statements, "Roger, standby," although Rash 32 indicated he heard, "Roger that." (It was apparent from later testimony that neither pilot fully understood the other.) It appeared that Rash 32 took Cavalier's "Roger" as clearance for the strike, while Cavalier 14 thought Rash had been cleared by someone else on the ground. Although the ground elements heard the impact of the marking rounds and were aware of the fighters overhead, it did not occur to them that they were being set up for an airstrike and therefore did not signal their positions with colored smoke. In approximately ten minutes of circling overhead, firing marking rockets, talking with Cavalier 14, and with Rash Alpha, the FAC was never told to hold high and dry, nor that there were friendly troops in the area.^{38/}

TIC SHORT ROUND - A SHAU VALLEY

YD 363013
PREPLANNED, FRAGGED TARGET
MK-82/BLU-27B RELEASED HERE

A LUOI (RASH ALPHA TACP)

GUNSHIP'S
TARGET

MARKING ROCKETS
FIRED BY RASH 32

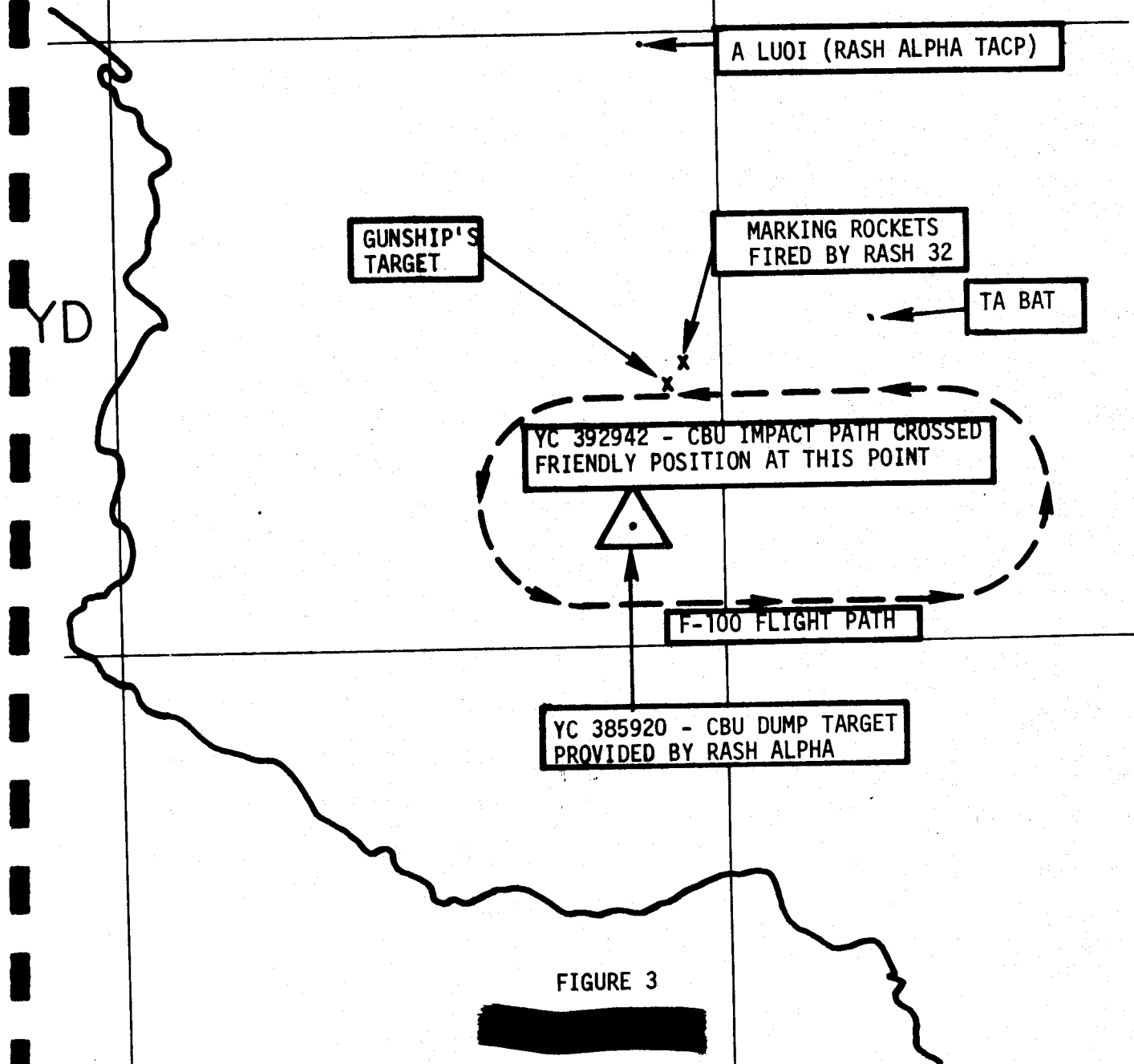
TA BAT

YC 392942 - CBU IMPACT PATH CROSSED
FRIENDLY POSITION AT THIS POINT

F-100 FLIGHT PATH

YC 385920 - CBU DUMP TARGET
PROVIDED BY RASH ALPHA

FIGURE 3



1944



1944

[REDACTED]

After obtaining what he assumed to be a release clearance by the Cavalier helicopter to strike YC 392942, Rash 32 fired a third marking rocket and cleared Elect 04, the aircraft with the CBU load, to deliver his ordnance on an east-to-west heading starting 20 meters short of the marking rocket. The ordnance was delivered on target as directed, with the CBU impacting directly across D Company, 1/12th Cavalry, and wounding 23 cavalrymen troopers (all later expected to recover). After the on-target delivery, the strike pilots and forward air controller saw colored smoke in and around the impact area and immediately terminated the strike.^{39/}

The multiplicity of factors contributing to the incident was evident, but the ultimate responsibility devolved upon the FAC, Rash 32, in that he "...changed the CBU dump area without obtaining clearance. Neither did he check with all available sources for the location of friendly troops, i.e., the helicopter gunships which were supporting the ground assault." If such clinical terms should imply that the FAC was singled out to shoulder all guilt for the Short Round, such was not the view of those who were familiar with the individual pilot, the area, and the situation. In a statement regarding the events that^{40/} led up to the incident, the ALO of the 1st Air Cavalry pointed out:

"...He did not rush right in to place the strike but took much effort and time to try and identify the helicopters and establish contact. Unfortunately, the helicopter he did get contact with was not in the immediate area; however, this fact

[REDACTED]

was not known to (the FAC). During the ten to fifteen minutes in which three marking rockets and four dry passes by the fighters were made, the ground troops did not mark their positions. All during the chain of events, numerous occasions presented themselves which, if properly utilized by all parties involved, could have averted the incident.

"In no way is the above written to try to shift the primary responsibility for the incident... but rather to point out the unfortunate chain of events leading to the occurrence. Certainly, official notice and action must be taken. However, it is believed that all factors being properly considered, should mitigate the severity of any action taken."

Maj. Gen. John J. Tolson, commanding general of the 1st Air Cavalry Division, in a Memorandum for Record regarding the Short Round, stated in part: ^{41/}

"While an incident of this nature is a serious matter in that human life and safety is involved, I know that when large volumes of tactical air are used in a fluid tactical situation with ground troops accidents can and do happen. In the last sixty days, covering two large operations, the Air Force pilots attached to this Division have done a really great job. Their effectiveness and performance have been a decisive part of the Division's battle effort. Their direction and placement of airstrikes reflect great professional competency.

"Each Forward Air Controller, each day...has flown to support this Division fully aware of their responsibility and the hazard of incidents of this nature. They have flown with zest and desire each day to fulfill their mission. This dedication and enthusiasm should not be dimmed."

[REDACTED]

The last statement indicated the delicate balance essential in the treatment of such incidents. The degree of responsibility must be met; the FAC or strike pilot must exhibit consummate judgment in the exercise of the mission. At the same time, a pilot who is timid or who has been made overly cautious is equally as ineffective in the application of airpower as the pilot who is overzealous. Rash 32 was described as neither, but as "...an extremely dedicated and motivated career officer...calm under fire, methodical and aggressively effective in his FAC work." In this instance, the action taken was to administer a Rules of Engagement examination and flight check to the FAC, after which it was recommended that no further action be taken against any pilot involved.^{42/}

Noncombatants in Target Vicinity

The troops-in-contact Short Rounds carried an undeniable emotional impact to all involved, especially since the injured or killed were comrades in arms. However, these were tough, well-trained and equipped soldiers, who instinctively reacted to the threat and took measures to best protect themselves from it. Flak vests, bunkers, trenches, and spider holes were usually available to them, and as a result these troops tended to keep their own casualties to a minimum, as attested by the aforementioned incident where, although 23 were wounded, none were killed.

As is often the case in warfare, it is perhaps the undefended civilian noncombatant who suffers most tragically in major Short Rounds.

[REDACTED]

Such an occurrence took place approximately five miles north of Tan Son Nhut Air Base early in 1968, when 44 Vietnamese civilians were killed, 57 wounded, with 112 structures destroyed and 166 damaged. At 1454H, on 13 February, an ARC LIGHT (B-52) mission under MSQ-77 control dropped approximately 65 per cent of their bombs outside the target area bounded by XT 826073, XT 839076, and XT 842067. Although these bombs did fall outside the target box proper, they all fell within the one kilometer buffer zone established around every ARC LIGHT target. The ARC LIGHT basic operation order stipulated that any target selected must not be less than three kilometers from friendly combatants and not less than one kilometer from the nearest noncombatants.^{43/}

The target was along one of the known highly-traveled North Vietnamese Army and Viet Cong quick access routes into the Saigon area and posed a threat to nearby Tan Son Nhut Air Base. Intelligence reports indicated that the target contained a NVA regimental staging area with numerous bunkers, fighting positions, foxholes, and trenches. Also, there were indications that a large number of VC had crossed the river into the target box on the night of 11 February and, although the general area was extensively cultivated and rather densely populated, it was validated for an ARC LIGHT strike. The target had been cleared for the airstrike by the U.S. 1st Infantry Division, U.S. 25th Infantry Division, the Deputy Senior Advisor at III Corps, and by Colonel Giam, Commander of the Capital Military District, at 2030H on 12 February.^{44/} This should have insured that no loyal South Vietnamese would be within one kilometer of the target box during the time of the proposed strike.

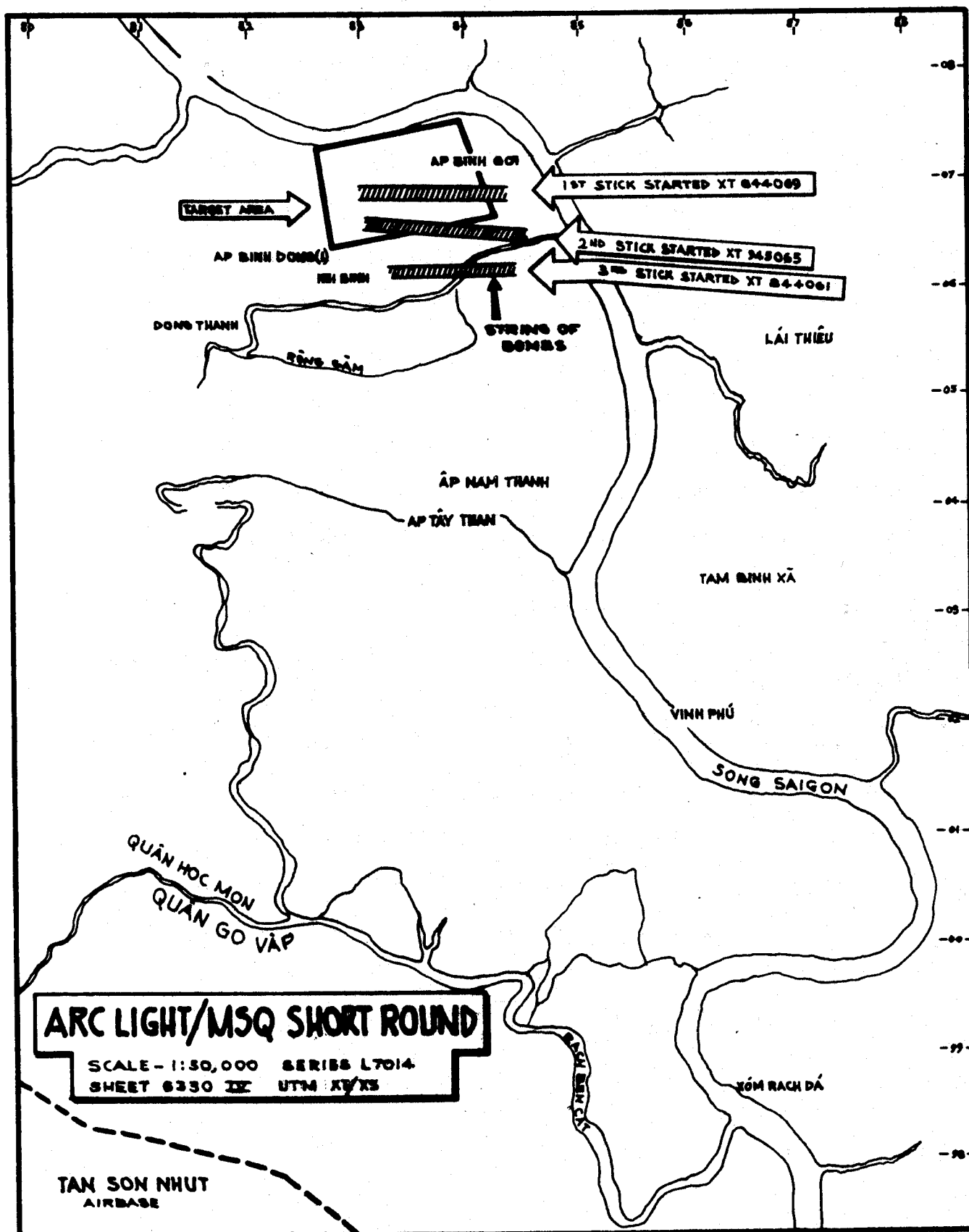


Figure 4

1974



[REDACTED]

The strike was to be controlled by MSQ-77 site OL-26 at Binh Thuy (GAP) and with OL-25 at Dalat (TEEPEE) as backup. Macon (OL-21) at Bien Hoa was also available if needed. As actually conducted, the mission began as a six aircraft flight consisting of two cells, Rust One, Two, and Three, and Ruby One, Two, and Three. Rust Lead aborted prior to contacting the MSQ sites, reducing the mission to five aircraft. At the Initial Point (IP), GAP and TEEPEE sites acquired Ruby by X-band beacon, but only TEEPEE, at Dalat, was able to go into computer track, so he directed the cell to the Desired Point of Impact (DPI) Nr. 1 at XT 84010685. Two aircraft in Ruby cell released, resulting in stick number one. (Figure 4) None of the site could receive an X-band beacon signal from Rust Two and Three, so Macon directed the cell by skin paint to DPI Nr. 2, XT 83900715, resulting in stick number two. Ruby Three had not received the "hack" to drop on the first run, but was brought around by TEEPEE for a second pass at DPI Nr. 2. This was stick number three.^{45/}

Strings one and two began impacting outside the target boundary but walked up into the box; string three's first impact landed approximately 400 meters south of the target's southeast coordinates. This string roughly paralleled the southern border of the target box. Of the total 330 bombs released, 35 percent impacted inside the designated target area; the remainder landed in the buffer zone.^{46/}

[REDACTED]

Upon notification that a Short Round had occurred, the investigative procedures went into effect. All flight crews were interrogated at the post-strike debriefing with emphasis on the use of any unusual or unorthodox procedures, with negative results. Detachment 15 of the 1st Combat Evaluation Group recomputed all MSQ data using the 101 computer and manual computations. All figures agreed with those used by TEEPEE within a fraction of a thumb-wheel. Maintenance personnel and the manufacturer's technical representative completed all ground accuracy checks on the equipment without any discrepancy being noted. Detachment 15 conducted a dynamic fly-in to verify the calibration of the OL-25 MSQ, which disclosed approximately one mil of angular error.^{47/}

The one mil angular error would result in the fly-in point being displaced roughly 260 meters from the DPI at a distance of 123 nautical miles. Although this was considered to be within established limits, other inherent limitations in the system such as basic equipment capabilities, ordnance ballistic dispersal, weather, and wind variations combined to increase circular error. (It was to allow for these cumulative errors that the 1,000 meter safety zone was established.)^{48/}

If for no other reason than the number of killed and wounded in the incident, the investigation was conducted with exceptional scope and thoroughness, double checking each conceivable possibility for error. In the final analysis, the investigators concluded that the Air Force portion of the operation had been conducted as requested. All systems operated within the specified limits; there were no personnel or

[REDACTED]

procedural errors in the execution of the strike.^{49/} The investigators recommended that a more intensive screening of targets be made by approving agencies before releasing them for strikes, since the possibility existed that this target did not meet the specifications for ARC LIGHT missions. It also had to be considered that the noncombatants could well have moved back into the area between the time it was cleared and the time of the airstrike.^{50/}

Investigative Responsibilities and Procedures

Because of the often serious nature of aerially inflicted Short Rounds, the Commander, Seventh Air Force, directed that every USAF-involved incident culminating in death or injury be fully investigated and the findings reported to him. As indicated in 7AFR 55-39, Short Round Incidents In-Country, it is the responsibility of each member of the command to initiate action whenever he has knowledge of such an occurrence, and the detailed responsibilities and procedures outlined attest to the depth and thoroughness desired in seeking out the causes of the Short Rounds.

When notified of the occurrence or possible occurrence of a Short Round, the Tactical Air Control Center (TACC) Senior Duty Officer immediately records all available information on the Initial Short Round Checklist. This checklist records information regarding the date, time, and location of the incident, the strike aircraft involved, the casualties and damage which resulted, and the type and amount of ordnance which struck the friendlies or noncombatants. This information, along with

[REDACTED]

details of the incident, such as the number, direction and altitudes of the passes on the target, the weather and visibility in target area, a description of the terrain and vegetation in the vicinity, and the status of navigation and communications equipment involved, is immediately passed along to all concerned, including the Commander, Seventh Air Force. This initial checklist provides answers to more than 40 immediate questions, and from it alone, a large portion of the incident may be reconstructed.^{51/}

Upon notification of a Short Round, the Chief, 7AF TACC, Weapons and Force Planning Branch (TACWFP), assumes office of primary responsibility for compiling, reviewing, and coordinating all data, and for maintaining a file concerning each incident. It is to him that the DASC Deputy Director, in whose area the incident occurred, sends a 12-hour interim report, used to update or complete the initial checklist. Within 72 hours, the DASC sends the completed Preliminary Investigation Report to TACWFP, including written statements from FACs, strike pilots, ground commanders or other persons involved, along with applicable maps or photographs as necessary, and a written summary of the entire incident. From this information, the Chief, TACWFP, summarizes the events of the Short Round, recommends possible courses of corrective action, and, if he deems it appropriate, states the need for further or formal investigation.^{52/}

[REDACTED]

Should the Commander, Seventh Air Force (or his designated representative), determine that the nature of the incident requires formal investigation, the appointed President of the Short Round Investigation Board will convene the board members and conduct the investigation as a duty which takes precedence over all others. This indicates the seriousness with which the Short Round situation is viewed.^{53/}

In addition to the mandatory elements of investigation which must be followed in each incident, any of several corollary actions may be accomplished, depending upon the circumstances of the event. Explosive Ordnance Disposal (EOD) teams may be called upon to "sterilize" an area, as for instance, when a CBU container was inadvertently dropped in the village of Tan Uyen (1 July 1966), leaving several dangerous dud bomblets around the marketplace, until they were removed by EOD.^{54/} Civic Action teams and Civil Engineers may be transported to an area to estimate reconstruction costs and to undertake the repair of noncombatants' homes damaged in Short Rounds. In the event of injury or death to Vietnamese family members, the Staff Judge Advocate's office expeditiously arranges for solatium payments to survivors to ease the financial straits caused by the incident, and as a sincere good will gesture on the part of the U.S. Government. To avoid lurid or distorted news coverage of an event, the Seventh Air Force Director of Information makes factual and complete news releases as promptly as possible through approved channels.^{55/}

These actions, basically designed to reduce the impact of such incidents upon those who were affected by them, had a beneficial secondary

[REDACTED]

effect--they countered, and in many instances completely reversed, communistic attempts to propagandize and capitalize upon the accidents.

Summary

Close operational supervision, coupled with dedicated command interest, managed to keep Air Force-involved Short Rounds to an average of two incidents per month through 1966 and 1967. It was apparent early in 1968, however, that the wider-ranging battle arena and intensity of the conflict were going to raise substantially the incidence of Short Rounds in South Vietnam. This observation has been borne out. In the first six months of 1968, 19 in-country Short Rounds involving Air Force aircraft (FAC or Strike) were recorded, compared to 14 incidents in the January - June period of 1967. The 1968 figures, if projected through the year, would be half-again larger than those of 1967, or ^{56/} three per month, rather than the long-standing average of two.

Perhaps most significant from the operations standpoint was the prevalence of incidents involving troops-in-contact. In this category ^{57/} were recorded 13 of the 19 total Short Rounds. The remainder involved:

- . An USAF B-57 inadvertently dropped a 500-pound bomb on the village of Cau Ke in IV Corps, killing six, wounding 17. Capabilities of ground radar to position aircraft over a small target area were insufficient.
- . An F-4C expended twelve 750-pound bombs by MSQ direction on target approved by TACC, I DASC and 9th U.S. Infantry Division. Original target was changed without sufficient notification to all concerned and an Army UH-1B helicopter was downed

[REDACTED]

by the blast; four U.S. sustained minor injuries, while the helicopter was destroyed.

- . An USAF FAC directed strikes and artillery into an authorized strike area after receiving U.S. and ARVN approval. Many unauthorized Vietnamese civilian loggers had entered the area prior to the airstrikes and artillery barrage; 21 loggers were killed, 21 wounded.
- . An USAF F-105 strafed an Army vessel inadvertently; casualties, details unavailable.
- . A cell of B-52s under MSQ control dropped short of target; casualties unknown. Possibility exists that cell dropped on release-hack meant for fighters on same frequency.
- . B-52 strike previously mentioned, wherein ordnance fell outside of target box but within buffer zone killing 44 and wounding 57 noncombatants.

In nearly all of the instances where troops-in-contact were hit by air-delivered ordnance, a combination of two or more of the following causes contributed to the incident: 58/

- . Lowered visibility, whether caused by smoke, dust, haze, or approaching darkness, obscured FACs or strike pilots' ground reference.
- . Friendly positions were not clearly marked or properly identified, or troops were out of position without notification to ground commander and/or FAC.
- . Breakdown in communication, where misunderstanding or incomplete understanding existed between FAC and strike pilot, FAC and ground commanders, or between ground commanders and own troops.
- . Troops in such close and heavy contact that ground commanders were persuaded to accept the risk of a few possible casualties in order to avert many more.

[REDACTED]

Other factors entered into these incidents, but on an "odd-chance" and non-trend-setting basis. The pilot whose thumb brushed the bomb release button instead of the trim button was one example. Another was the reported ricochet of a bomb in rocky terrain before it exploded near friendly troops. In some cases, as previously mentioned, bombs on-target caused friendly casualties when troops failed to take proper protective actions.

One heartening observation, even in the face of an apparently rising Short Round rate, was a refreshing trend away from some of the causes that had characterized previous years' incidents. Lack of knowledge of the effects of air-delivered ordnance, on the part of the ground commander, has been reduced by a continuing cross-tell of these effects by ALOs and FACs. Professionalism on the part of pilots precluded gross mistakes from being a factor in the first six months of 1968. Incomplete coordinate data and geographical misinterpretations, which were significant in several of the Short Rounds in 1965 and 1966, have been negligible as causes in recent months, and those Short Rounds involving malfunctioning components (short circuits, hung bombs, etc.) have not recently appeared as major factors. The constant improvement in these areas again appears to stem from close attention and command interest in "reducing the reducible".^{59/}

The problems surrounding the troops-in-contact type of incidents, while perhaps not insurmountable, seem to be far more complex and therefore resistant to "one cause, one cure" solutions. These TIC Short

[REDACTED]

Rounds are usually the result of several coincidental contributing causes, each of which complicates the others; they take place under combat pressure and a need for immediacy that accentuates human error, and against an enemy that purposely moves in close to further complicate ordnance delivery. Although the problems may defy total solution, TACWFP stressed that Commanders, DASC Deputy Directors, and Air Liaison Officers must make it a matter of personal and continuing concern. Among the points were: ^{60/}

"Strike pilots and FACs must be rebriefed on procedures to reduce the probability of Short Round incidents. Most Short Rounds occur at dusk and when troops are in close contact with the enemy. Generally the investigation points to the fact that friendly positions were not clearly identified or properly marked. Target areas must be clearly identified, marked by smoke initially and continually marked as necessary thereafter to eliminate identification errors. Close air support, air/ground control and coordination procedures must be periodically reviewed to insure that no confusion can possibly exist concerning the location of friendly forces or civilians."

[REDACTED]

FOOTNOTES

1. (CNF) Msg, COMUSMACV to VMAC, MACJ-341, Nr 15/68, 221235Z Jan 68, Doc. 1.
2. Ibid.
3. (S) Extract, CHECO Special Rpt, "Short Rounds", 28 Sep 67.
(U) (Gen W. C. Westmoreland's quote.)
4. (S) Extract, CHECO Special Rpt, "Short Rounds", 28 Sep 67.
5. (S) Formal Rpt of Investigation, Hq 7AF, "The Lang Bei Incident", 10 Mar 67.
6. (C) Short Round Summaries, 7AF TACWFP, 20 Jun 67, Tabs 15; 16. (7AF TACWFP Files.)
7. Ibid - 16 Jan 68, Tab 3.
8. Ibid.
9. (C) Rpt, DASC, III Corps, to 7AF (TACWFP), subj: Short Round Preliminary Investigation, (U), 12 Jan 68, Doc. 2. (Hereafter cited: Rpt, Short Round Preliminary Investigation, 12 Jan 68.)
10. (U) Statement, 2d Bde/25th Inf Div FAC, Maj Elwood L. Sanders, USAF, FR2222406, 4 Jan 68, Doc. 3. (Hereafter cited: Statement, Maj Elwood L. Sanders.)
11. Ibid.
12. Ibid.
13. Ibid.
14. (C) Rpt, Short Round Preliminary Investigation, 12 Jan 68, Doc. 2.
15. (U) Statement, Maj Elwood L. Sanders, Doc. 3.
16. (C) Staff Summary Sheet, Form 4, Hq 7AF, Dep Dir, TACC, subj: Short Round Rpt III Corps - 4 Jan 68, dtd 27 Jan 68, Doc. 4.
17. (C) Rpt, Short Round Preliminary Investigation, 12 Jan 68, Doc. 2.
18. Ibid.
19. Ibid.

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20. (U) Statement, FAC Cider 17, Capt Richard S. Moseley, FR80170, 27 Feb 68, Doc. 5. (Hereafter cited: Statement, FAC Cider 17.)
21. (U) Statement, Capt George W. Hanks, FR71177, 31st TFW, Tuy Hoa AB, RVN, Undtd, Doc. 6; Statement, Capt Richard C. Hardy, FR71236, 306th IFS, Tuy Hoa AB, RVN, Undtd, Doc. 7.
22. (C) Staff Summary Sheet, Form 4, Hq 7AF, Dep Dir, TACC, subj: Short Round Rpt - 27 Feb 68, Undtd, Doc. 8. (Hereafter cited: Short Round Report - 27 Feb 68.)
(U) Rpt, Hq 31st TFW to 7AF (TACWFP), subj: Short Round Preliminary Investigation, 3 Mar 68, Doc. 9. (Hereafter cited: Rpt, Short Round Preliminary Investigation, 3 Mar 68.)
23. (U) Statement, FAC Cider 17, Doc. 5.
24. (U) Rpt, Short Round Preliminary Investigation, 3 Mar 68, Doc. 9.
25. Ibid.
26. (U) Statement, FAC Cider 17, Doc. 5.
27. (U) Rpt, Short Round Preliminary Investigation, 3 Mar 68, Doc. 9.
28. Ibid.
29. (S) CHECO Rpt, Hq PACAF, "Short Rounds", 28 Sep 67.
30. (C) Short Round Rpt - 27 Feb 68, Doc. 8.
31. (U) Rpt, DASC Victor to 7AF (TACWFP), subj: Short Round Preliminary Investigation, 5 May 68, Doc. 10. (Hereafter cited: Rpt, Short Round Preliminary Investigation, 5 May 68.)
32. Ibid.
33. Ibid.
34. Ibid.
35. (U) Statement, Capt James D. Freebairn, 3 May 68, Doc. 11.
36. (U) Short Round Preliminary Investigation, 5 May 68, Doc. 10.
37. Ibid.
38. (C) Staff Summary Sheet, Form 4, Hq 7AF, Dir Dep, TACC, subj: Short Round Rpt, 3 May 68, (U), dtd 2 Jun 68, Doc. 12. (Hereafter cited: Form 4, Short Round Rpt - 3 May 68.)

UNCLASSIFIED

UNCLASSIFIED

- 39. (U) Rpt, Short Round Preliminary Investigation, 5 May 68, Doc. 10.
- 40. (U) Statement, Div ALO, 1st Cav Div (Airmobile), subj: Short Round Incident, Undtd. (7AF TACWFP Files)
- 41. (U) Memo for Record, CG, 1st Air Cav Div (Airmobile), subj: Firing Incident, 03 May 1968, dtd 7 May 68, Doc. 13.
- 42. (C) Form 4, Short Round Rpt - 3 May 68, Doc. 12.
- 43. (S) Investigation Rpt, Brig Gen Jones E. Bolt, 7AF TACC to PACAF, CC & MACV COC-2, subj: Short Round Rpt - 13 Feb 68, (U), dtd 11 Mar 68, Doc. 14.
- 44. (S) Staff Summary Sheet, Form 4, Hq 7AF, subj: Short Round Rpt - 13 Feb 68, (U), dtd 26 Feb 68, Doc. 15.
(S) Rpt, Hq 7AF TACWFP, subj: Short Round Preliminary Investigation, (U), undtd, Doc. 16.
- 45. Ibid.
- 46. Ibid.
- 47. Ibid.
- 48. Ibid.
- 49. Ibid.
- 50. Ibid.
- 51. (U) 7AFR, Hq 7AF, Nr 55-39, subj: Short Round Incidents (In-Country), 19 Oct 67, w/1 Atch. Atch 1, Initial Short Round Rpt Checklist, 19 Oct 67, Doc. 17. (Hereafter cited: 7AFR, Nr 55-39.)
- 52. (U) Ibid.
- 53. Ibid.
- 54. (S) CHECO Special Rpt, "Short Rounds", 28 Sep 67. (Extracted portion CONFIDENTIAL.)
- 55. (U) 7AFR, Nr 55-39, Doc. 17.
- 56. (S) Short Round Index, 1968. (TACWFP Files)

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57. Ibid.

58. Ibid.

59. Ibid.

60. (C) Paper, Hq 7AF TACWFP, subj: Short Rounds, 8 Mar 68.

[REDACTED]

APPENDIX I

SUMMARY OF SHORT ROUNDS IN RVN
JAN - JUN 1968

USAF-INVOLVED INCIDENTS

INVESTIGATION
CLOSED

1. VNAF Ordnance on Friendlies (TIC), 4 Jan 68	1 Mar 68
2. F-100 Ordnance on Friendlies (TIC), 4 Jan 68	16 Feb 68
3. F-100 Ordnance on Friendlies (TIC), 11 Jan 68	13 Jan 68
4. USAF B-57 Strike on Friendlies, 15 Jan 68	30 Jan 68
5. F4C/CSS Strike Near UH-1B, 16 Jan 68	30 Apr 68
6. Civilian Casualties from Artillery/Airstrike, 19 Jan 68	30 Apr 68
7. F-105 Strafes Army Ship, 12 Feb 68	30 Apr 68
8. B-52/CSS, Civilians in Buffer Zone, 13 Feb 68	25 Mar 68
9. USMC A-4 (USAF FAC Directed) Short Round (TIC), 26 Feb 68	30 Apr 68
10. F-100 Short Round, 15 NM SSW Da Nang (TIC), 27 Feb 68	30 Apr 68
11. F-100 CBU Short Round, W Dak To (TIC), 27 Feb 68	4 Apr 68
12. B-52 Short Round, 23 Mar 68	22 May 68
13. USMC (USAF FAC Directed) Short Round (TIC), 23 Mar 68	15 May 68
14. F-100 Short Round (TIC), 27 Mar 68	
15. F-100 Short Round on 1st Air Cav Div (TIC), 3 May 68	
16. F-4D Ordnance on Friendlies (TIC), 6 May 68	22 May 68
17. F-4C Ordnance on 1st Air Cav Div (TIC), 21 May 68	
18. F-4C Ricocheted Bomb on Friendlies (TIC), 22 May 68	
19. A-37 Ordnance on ARVN Troops (TIC), 28 May 68	

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GLOSSARY

ALO	Air Liaison Officer
ARVN	Army of Republic of Vietnam
CBU	Cluster Bomb Unit
COMUSMACV	Commander, U.S. Military Assistance Command, Vietnam
DASC	Direct Air Support Center
DPI	Desired Point of Impact
DTOC	Division Tactical Operations Center
EOD	Explosive Ordnance Disposal
FAC	Forward Air Controller
FEB	Flying Evaluation Board
FM	Frequency Modulation
HD	High-Drag
IP	Initial Point
LZ	Landing Zone
MACV	Military Assistance Command, Vietnam
mm	millimeter
NVA	North Vietnamese Army
RTB	Return to Base
RVN	Republic of Vietnam
TACC	Tactical Air Control Center
TACP	Tactical Air Control Party
TACWFP	Tactical Air Control Center Weapons & Force Planning Branch
TIC	Troops-in-Contact
TUOC	Tactical Unit Operations Center
UCMJ	Uniform Code of Military Justice
UTM	Universal Transverse Mercator
VNAF	Vietnamese Air Force
WP	White Phosphorus

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SECRET

1. The purpose of this document is to provide information regarding the activities of the [redacted] organization. This information is being provided to you for your information only and is not to be distributed outside of your organization.

2. The [redacted] organization is a [redacted] organization that is engaged in [redacted] activities. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

3. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

4. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

5. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

6. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

7. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

8. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

9. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

10. The [redacted] organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future. The organization is currently engaged in [redacted] activities and is planning to engage in [redacted] activities in the future.

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